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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Risto Pekka Antero Nokelainen
Serial No: 09/935,917
Confirmation No.: 2006
Filed: August 23, 2001
For: PERFORATION DEVICE
Examiner: Kenneth E. Peterson
Art Unit: 3724

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Sir:

Transmitted herewith are the following documents:

- ☒ Revised Appellant Brief (in triplicate)
- ☒ Return Receipt Postcard

If the enclosed papers are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned at (617) 720-3500, Boston, Massachusetts.

No fee is enclosed. If a fee is required, it may be charged to Deposit Account No. 23/2825. A duplicate of this sheet is enclosed.

Respectfully submitted,
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**APPEAL BRIEF
-EXPEDITED PROCEDURE-
ART UNIT: 3724**

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REVISED APPELLANT BRIEF

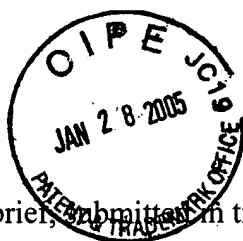
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This brief, submitted in triplicate, is in furtherance of the Notice of Appeal filed in this case on January 12, 2004.

The fees required under 37 C.F.R. §1.17(c) are dealt with in the accompanying Transmittal of Appeal Brief.

I. REAL PARTY IN INTEREST (37 C.F.R. §1.192(c)(1))

The real party in interest in this matter is Mail Systems Oy, a Finland Corporation, the Assignee of current record. The above-named inventor Risto Pekka Antero Nokelainen assigned all his rights in the invention to Mail Systems Oy on March 3, 1998, in an Assignment recorded in the United States Patent and Trademark Office on May 18, 1998, at Reel 9199, Frame 0363.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. §1.192(c)(2))

The undersigned appellant's legal representative avers that to the best of his/her knowledge and belief, there are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the instant appeal.

III. STATUS OF CLAIMS (37 C.F.R. §1.192(c)(3))

This Appeal involves all of the claims pending in the application, claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38, all of which stand finally rejected under 35 U.S.C. § 103 (a).

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are:	1-38
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B. STATUS OF ALL THE CLAIMS

1. Claims canceled:	None
2. Claims withdrawn from consideration but not canceled:	3-10, 16, 18-21, 24-26, 29 and 31-34
3. Claims pending:	1, 2, 11, 14, 15 17, 22, 23, 27, 28, 30 and 35-38
4. Claims allowed:	None

5. Claims rejected:

1, 2, 11, 14, 15
17, 22, 23, 27,
28, 30 and 35-38

C. CLAIMS ON APPEAL

Claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38
are reproduced in Appendix A.

IV. STATUS OF AMENDMENTS (37 C.F.R. §1.192(C)(4))

The Amendment under 37 C.F.R. §1.116, mailed on October 26, 2004, was not entered. Thus, the proposed amendments to claim 1 set forth in the Amendment were not entered. Applicant had incorporated the proposed amendments into the discussion of claim 1 set forth in Sections V and VIII of the Revised Appeal Brief filed on October 26, 2004. However, in response to the proposed amendments not being entered, Applicant has revised Sections V and VIII below to remove the previous incorporations of the proposed amendments to claim 1.

A Notice of Non-compliance was mailed on December 28, 2004. The Notice included a Continuation Sheet, which included additional comments of Examiner Peterson. Applicant's representative, Daniel P. McLoughlin, telephoned Examiner Peterson on January 5, 2005, seeking clarification of the Examiner's comments, and ascertaining whether Applicant would be permitted to respond to the comments in the Revised Brief. The Examiner indicated that Applicant was permitted to so. Applicant and Applicant's representatives appreciate the courtesy extended by Examiner Peterson in clarifying the comments and allowing Applicant the opportunity to respond. Accordingly, Applicant has added additional remarks in Section VII below.

V. SUMMARY OF INVENTIONS (37 C.F.R. §1.192(C)(5))

Applicant's invention relates to a perforator that perforates only selected sheets. (Page 2, lines 1-3). The perforator includes a perforating tool which can be selectively set in a position for perforating or in a neutral position in which no perforation is performed. (Page 2, lines 4-5). The perforating tool may be programmed to either receive a signal from a printer or output data or to read a code on a sheet of paper being fed to the perforating tool (page 2, lines 12-13). In

this manner, sheets of paper selected from a group of sheets can be perforated as the group is moving successively through the perforator. Thus, perforation is performed selectively only on the desired sheets. (Page 2, lines 20-22). Applicant's invention solves the drawback of known perforators, in which every sheet of paper that passes through the perforator is perforated. (Page 1, lines 25-29).

Accordingly, claim 14 is directed to a method of perforating selected sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device. (Page 2, lines 1-5, 12-13, 20-22; Fig. 3). The perforating device includes a first perforating tool for perforating sheets of paper and a control unit for controlling the perforating tool. (Page 3, lines 10-13 and 19; Figs. 2 and 3). The first perforating tool perforates the paper in a direction parallel to the direction of movement of the sheets. (Page 2, line 1; Figs. 1 and 3). The method comprises successively receiving a plurality of sheets of paper as inputs to the perforating device. (Page 3, lines 4-5). The method further comprises positioning the first perforating tool in either a perforating position to perforate paper, or a neutral position to allow paper to pass imperforated (i.e., without being perforated). (Page 2, lines 4-5; page 3, lines 7-9).

Claim 15 is directed to the method of claim 14, and includes maintaining the first perforating tool in the neutral position if no second control signal is received at the first perforating tool (page 3, lines 14-16). In claim 17, which is also directed to the method of claim 14, the first control signal is received from a reader that reads codes from the sheet of paper (page 2, lines 12-13). In claim 37, which is directed to the method of claim 17, the method further comprises, for at least the first sheet, reading a code from the first sheet on which the first control signal is based (page 2, lines 12-13; page 3, lines 19-21).

Claim 22 also is directed to the method of claim 14 and recites that receiving the first control signal includes reading a code in the sheets with a reader (page 2, lines 12-13).

Claim 1 is directed to a perforator for selectively perforating sheets of paper of a group of sheets. The sheets to be perforated are selected as the group is moving successively through the perforator, the perforation extending in the direction of the movement of the sheets. (Page 2, lines 1-3, 12-13, 20-25; Fig. 3). The perforator comprises a first perforating tool past which one or more sheets of paper move successively. The first perforating tool has a perforating position

to perforate paper passing the perforating tool, a neutral position to refrain from perforating paper passing the perforating tool, and an input for receiving a first control signal. (Page 2, lines 4-5; page 3, lines 4-9, 29-31; Figs. 2-4). The perforator also comprises an electronic control apparatus having an input to receive a second control signal as the group of sheets moves through the perforator and an output connected to the input of the first perforating tool. For each sheet of paper that passes the first perforating device, the second control signal is based on information specific to the sheet. (Page 2, lines 12-13; page 3, lines 19-21; Figs. 2-3). The electronic control apparatus is configured such that, for each sheet of paper that passes the first perforating tool, if perforation is desired for the sheet based on the second control signal, the electronic control apparatus emits a signal from the output of the electronic control apparatus to the input of the first perforating tool to place the first perforating tool in the perforating position. If perforation is not desired for the sheet based on the second control signal, the electronic control apparatus does not emit a signal to the first perforating tool. (Page 2, lines 12-13; page 3, lines 10-16, 19-21).

Claim 2 is directed to the perforator of claim 1. The electronic control apparatus is operative, for each sheet of paper that passes the first perforating device, to set a distance of the first perforating tool from the sheet such that, in the first perforating position, the first perforating tool touches the sheet, and in the neutral position, the first perforating tool is kept apart from the sheet. (Page 2, lines 4-8; page 3, lines 7-9).

Claim 35 is directed to the perforator of claim 1. For each sheet of paper that passes the first perforating device, the second control signal is based on a code on the sheet of paper (page 2, lines 12-13; page 3, lines 19-21). In claim 36, which is directed to the perforator of claim 35, the perforator is connected to a reader that, for each sheet of paper that passes a perforating device, reads the code from the sheet of paper. (Page 2, lines 12-13).

Support for claims 27, 28, 30 and 35 should be clear from the foregoing discussion with respect to claims 1, 2, 35 and 36.

VI. ISSUES PRESENTED FOR REVIEW ON APPEAL (37 C.F.R. §1.192(c)(6))

Whether claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 4,721,058 (Hayamizu) in view of U.S. Patent No. 5,334,126 (Moll).

VII. GROUPING OF CLAIMS (37 C.F.R. §1.192(c)(7))

For the purposes of this Appeal only, the claims do not stand or fall together, but include three groups of claims: claims 11, 14, 15, 17, 22, 23 and 37 (Group I); claims 1, 2, 35 and 36 (Group II) and claims 27, 28, 30 and 38 (Group III). These three groups are each separately patentable for the reasons set forth below in Section VIII.

VIII. ARGUMENT (37 C.F.R. §1.192(c)(8)(iv))

The Appellant respectfully requests that the Examiner's final rejection of all of the claims be reversed. The claims as presented are believed to be in allowable condition. Claims 1, 2, 11, 14, 15, 17, 22, 23, 27, 28, 30 and 35-38 were finally rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Hayamizu in view of Moll. Appellant respectfully appeals this rejection for the reasons set forth below. In short, the Examiner has: 1) failed to establish a prima facie case of obviousness for the § 103(a) rejection of the claims of Group I, namely 11, 14, 15, 17, 22, 23 and 37; and 2) failed to establish a prima facie case of obviousness for the § 103(a) rejection of the claims of Group II, namely claims 1, 2, 28, 30, 35, 36 and 38.

A. DISCUSSION OF HAYAMIZU

Hayamizu is directed to a drawing paper cutting system for automatic drawing machines using continuous roll type drawing paper. (Col. 1, lines 6-8). Hayamizu discloses that a common problem with cutting units of drawing machines is that such machines are preconfigured to cut drawing paper to only one size. If a different sized drawing sheet is required, it must be printed on the larger sheet which has to be subsequently cut to size in a separate, non-automatic operation. (Col. 1, lines 23-45). This required extra step of cutting off the excess or blank portions decreases the operating efficiency of a high-output drawing machine. (Col. 1, lines 45-54).

To solve this problem, Hayamizu discloses a paper cutting system for automatic drawing machines that use continuous roll type drawing paper (col. 1, lines 57-60; Figs. 1 and 2). The continuous roll type drawing paper has drawings and coded data thereon, and is fed to the paper cutting means 9. For each drawing, the cutting system reads coded data for the drawing from the roll of paper and cuts the drawing paper accordingly. (Col. 3, lines 11-46; Figs. 1 and 2). The cutting means 9 includes an X-axis lengthwise cutter 78 to continuously cut the roll of paper along the direction of movement of the roll (col. 2, lines 9-27; col. 7, lines 55-60) to prevent excess blank portions, and a Y-axis widthwise cutter 75 to cut the roll of paper at right angles to the direction of movement of the roll (col. 2, lines 1-9; col. 6, lines 12-16) to cut the roll of paper into individual sheets.

The cutting means 9 also includes signal detectors 20 and a control unit 12 (Figs. 1 and 5; col. 4, lines 30-32). For each drawing on the roll, the signal detectors 20 will read the associated coded data. (Col. 4, lines 3-10). Signals corresponding to the coded data for the drawing are input to the control unit 12, in response to which the control unit 12 sends a signal to driving motors 36, 37 of X-axis lengthwise cutter 78. (Col. 3, lines 30-32; col. 4, lines 3-10, 61-62; col. 7, lines 60-62).

B. DISCUSSION OF MOLL

Moll is directed to an apparatus for applying a line of perforations of controlled length to sheets of paper while they are traveling through a paper folding machine. (Col. 1, lines 6-10). Moll discloses presetting the values of a set of switches on the paper folding machine. Sheets of paper then are fed to the paper folding machine, and each sheet is cut according to the preset values of the switches. (Col. 4, lines 17-24; Col. 5, lines 8-34).

C. EXAMINER'S POSITION

The Examiner's rejection, which originally appeared in the Office Action mailed February 19, 2003 (paper no. 6), and which was maintained in the Final Office Action mailed June 6, 2003 (paper no. 9), is as follows. The Examiner asserted that it would have been obvious to one of ordinary skill in the art to have modified Hayamizu by making his cutting blades be perforating blades, as taught by Moll, in order to keep all of the products together for later disassembling. In the Final Office Action, the Examiner also took Official Notice that the use of

perforation blades and non-perforation blades in the same machines is a common feature of many different types of cutting machinery, and provides several reasons why perforation is performed instead of cutting (Final Office Action, Pages 2-3).

In response to Applicant's argument that Hayamizu does not successively receive a plurality of sheets, the Examiner contends that "Hayamizu's sheets may be long and come in roll form, but they are sheets nonetheless, and ultimately, Hayamizu's machine will receive a plurality of them." The Examiner further contends that the size of a sheet "is an obvious variation as shown by Moll and many other references."

In the Notice of Non-compliance (Continuation Sheet, second paragraph, lines 3-4), the Examiner states "Hayamizu, after the transverse cutter (69), does indeed send a succession of individual normal-sized sheets (much like Applicant) to the next cutter (90), which has been modified to be a perforator. Also, Applicant may want to address the motivation set forth by Moll for perforating on lines 15-24 of column1 [sic], namely that it is advantageous to keep parts together for mailing, and let the end-user decide when to separate them. Another thing Applicant should consider is that it is obvious to modify Moll in view of Hayamizu, by adding the barcodes and reader, in order to automate the process."

D. THE EXAMINER HAS FAILED TO ESTABLISH A PRIMA FACIE CASE OF OBVIOUSNESS

As set forth in MPEP §2143, three criteria must be met in order to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the cited references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to modify the reference, or to combine reference teachings, and the reasonable expectation of success must both be found in the prior art, and not based on Appellant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner has failed to establish a *prima facie* case of obviousness at least because one of skill in the art would not be motivated to combine Hayamizu and Moll, and even if the

references were combined, the resulting combination would not teach or suggest all of the limitations of the claims.

1. ONE OF SKILL IN THE ART WOULD NOT BE MOTIVATED TO MODIFY THE CUTTING BLADE OF HAYAMIZU TO PERFORM PERFORATION AS TAUGHT BY MOLL BECAUSE SUCH MODIFICATION WOULD RENDER HAYAMIZU UNSATISFACTORY FOR ITS INTENDED PURPOSE

There is no motivation or suggestion to modify the cutting blade of Hayamizu to perforate as taught by Moll because such combination would render the system taught by Hayamizu unsatisfactory for its intended purpose.

The system of Hayamizu eliminates the need to cut blank portions from already-cut drawing sheets, thereby increasing the operating efficiency of a high-output drawing machine. The Office Action proposes modifying the system taught by Hayamizu by replacing the cutting blade of the system with a perforating blade “in order to keep all of the product together for later disassembling.” Such modification, however, would render the Hayamizu system unsatisfactory for its intended purpose of removing blank portions of cut drawing paper. Rather, such modified system would require the very step of removing blank portions delimited by the perforations (i.e., “disassembling”) that Hayamizu seeks to eliminate. Therefore, the required suggestion or motivation is entirely lacking. *MPEP §2143 (original 8th ed. August 2001, latest revision February 2003)* (“If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).)

As noted above, the Examiner has invited Applicant to address the contention set forth in the Notice of Non-Compliance regarding the alleged motivation set forth in Moll for perforating (col. 1, lines 15-24 of column1); namely that it is advantageous to keep parts together for mailing, and let the end-user decide when to separate them. However, this cited passage merely describes well-known uses for perforated sheets of paper, and fails to provide any motivation to one of skill in the art to modify a cutting blade to be a perforating blades, as such blades serve entirely different purposes. In fact, the cited passage is silent regarding cutting blades.

As noted above, the Examiner took official notice that the use of perforation blades and non-perforation blades in the same machine is a common feature of many different types of cutting machinery.

The Examiner's Official Notice is not a sufficient basis for an obviousness rejection, because the Examiner's assertion that "use of perforation blades and non-perforation blades in the same machines is a common feature of many different types of cutting machinery" is not capable of instant and unquestionable demonstration as being well-known. As set forth under MPEP 2144.03, "It would not be appropriate for the Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. . ." [A]ssertions of specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art." In re Ahlert, 424 F.2d 1088, 1091, 165 USPQ 418, 420-421 (CCPA 1970). "It is never appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record, as the principle evidence upon which a rejection was based." In re Zurko, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). "[A]n assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support." Id. at 1385, 59 USPQ2d at 1697. The Examiner failed to provide the required citation to a reference work recognized as standard in the pertinent art and the Official Notice lacks substantial evidentiary support.

Even if the Examiner's assertion were true, the cutting machinery disclosed by Hayamizu is not one of the types of cutting machinery that would use perforating blades. As explained above, modifying the system of Hayamizu to use a perforating blade would create the very problem that Hayamizu seeks to eliminate, i.e., the additional step of removing blank portions of the drawing paper. Therefore, such modification would render Hayamizu unsatisfactory for its intended purpose. Thus, one of skill in the art would not be motivated to modify the system of Hayamizu to include a perforating blade regardless of how well-known it is to do so for different types of cutting machinery.

As noted above, the Examiner has invited Applicant to address the Examiner's contention in the Notice that it is allegedly obvious to modify Moll in view of Hayamizu, by adding the barcodes and reader, in order to automate the process. One of skill in the art would not look to Hayamizu, which is directed to a paper cutting system and which (as described above) teaches away from perforating, to determine how to automate the perforating system of Moll. Moreover, as discussed above, the perforating device of Moll is already automated to

perforate sheets of paper according to pre-set switches. Such a perforating device is well-suited for perforating a batch of sheets of paper in identical fashion, according to the pre-set values of the switches. Thus, there would be no motivation to one of skill in the art to modify the perforating device of Moll to include barcodes and a reader, as such motivation is not provided by either reference. Further, neither Moll nor Hayamizu teach *how* to modify the pre-set device of Moll, directed to perforating, to accommodate the bar codes and a readers of Hayamizu used for cutting paper. Lastly, as described in more detail below, even if there were the requisite motivation (which there is not) to modify the perforating device of Moll to use bar codes and a reader as taught by Hayamizu, the resulting system would not include all of the limitations recited in each of the pending claims.

**2. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE
RESULTING COMBINATION WOULD NOT TEACH OR
SUGGEST ALL THE LIMITATIONS RECITED IN CLAIM 14**

Even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest all of the limitations recited in claim 14. The resulting combination would not teach or suggest a method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device including a first perforating tool, the method comprising, *inter alia*, positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass imperforated. Further, such combination would not teach or suggest a method of selectively perforating sheets of paper of a group of sheets, the method comprising, *inter alia*, successively receiving moving sheets at a perforating device.

**a. EVEN IF HAYAMIZU AND MOLL WERE COMBINED,
THE RESULTING COMBINATION WOULD NOT
TEACH OR SUGGEST A METHOD OF SELECTIVELY
PERFORATING SHEETS OF PAPER OF A GROUP OF
SHEETS, WHEREIN SHEETS TO BE PERFORATED
ARE SELECTED AS THE GROUP IS MOVING
SUCCESSIVELY THROUGH A PERFORATION
DEVICE.**

Even if motivation existed to modify the cutting blade of Hayamizu to perforate as taught by Moll, and a “roll” of paper as disclosed by Hayamizu were improperly construed to be a “sheet” of paper (see section 2.b below), the combination of Hayamizu and Moll still would not

teach or suggest a method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device that includes a first perforating tool, the method comprising, *inter alia*, positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass imperforated. Hayamizu does not teach or suggest selecting sheets to be cut as the sheets move through the paper cutting means, including positioning the X-axis lengthwise cutter in either a position to cut paper or a position to allow paper to pass uncut. Rather, Hayamizu discloses that a lengthwise and widthwise cut is made for each drawing on the roll of paper. Thus, in Hayamizu, drawings are not selectively cut, but each drawing is automatically cut several times. In addition, even if the Examiner's interpretation of the term "sheet" were adopted, each and every roll of paper would be cut, not just selected rolls as required by claim 14. Further, Moll discloses presetting values for a perforator before receiving any sheet of paper, such that all sheets are perforated (and are perforated the same way), not just selected sheets. Thus, there is no teaching at all in either Hayamizu or Moll of selectively perforating sheets. Thus, even if motivation existed to modify Hayamizu to perforate as taught by Moll, and a continuous roll was improperly construed to be a sheet of paper, the combination of Hayamizu and Moll still would not teach or suggest perforating only selected sheets, and not all sheets. Rather, such combination would teach just the opposite—automatically perforating each sheet of paper.

In view of the foregoing, even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest a method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforation device including a first perforating tool, the method comprising, *inter alia*, positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass imperforated.

- b. **EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING COMBINATION WOULD NOT TEACH OR SUGGEST A METHOD OF SELECTIVELY PERFORATING SHEETS OF PAPER OF A GROUP OF SHEETS, THE METHOD COMPRISING SUCCESSIVELY RECEIVING A PLURALITY OF SHEETS OF PAPER AS INPUT TO A PERFORATING DEVICE.**

Even if motivation existed to modify the cutting blade of Hayamizu to perforate as taught by Moll, the resulting combination of Hayamizu and Moll still would not teach or suggest employing a method of selectively perforating sheets of paper of a group of sheets, comprising, *inter alia*, successively receiving a plurality of sheets of paper as input to a perforating device. As described above, Hayamizu discloses a cutting system that receives a continuous *roll* of paper that is cut into sheets, not *receiving* individual *sheets* of paper. As noted above, the Examiner contends that Hayamizu's "sheets" may be long and come in roll form, but are sheets nonetheless, and that the size of a sheet is an obvious variation. In short, the Examiner contends that the continuous roll of paper disclosed in Hayamizu is merely a large sheet of paper. Applicant respectfully disagrees, as the Examiner has adopted an unreasonable interpretation of the term "sheets of paper." A sheet of paper is not merely a smaller version of a roll of paper, but is a different form of paper all together. In fact, both Hayamizu and the Applicant distinguish between paper in continuous roll form and individual sheets of paper. As discussed above, Hayamizu discloses a Y-axis widthwise cutter that cuts the roll of paper into individual sheets, and Applicant discloses that a roll of paper (e.g., taken from a reel) may be a source of paper from which individual sheets of paper are cut (page 3, lines 17-19; Fig. 2). Furthermore, a sheet of paper has a commonly understood meaning, as reflected by its dictionary definitions. ("It is well settled that dictionaries provide evidence of a claim term 'ordinary meaning.'" *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed. Cir. 2002)). The Merriam-Webster Dictionary defines a sheet as "a single piece of paper." *The Merriam-Webster Dictionary* 672 (5th Ed. 1997). Such a definition would expressly exclude a continuous roll, which would not be considered a *piece* of paper. Therefore, in contrast to the contention of the Examiner, a continuous roll of paper (e.g., as taught by Hayamizu) is not a sheet of paper as recited in claim 14.

Further, Hayamizu provides no motivation for one skilled in the art to replace the continuous roll-type of paper with sheets of paper as taught by Moll and other references. Hayamizu discloses a Y-axis cutter for automatically cutting the continuous roll of paper into individual sheets. Therefore, there is no motivation to feed individual sheets into the cutting system of Hayamizu, as such would render the automatic cutter unnecessary. Accordingly, one of skill in the art would not be motivated to modify the cutting system of Hayamizu to receive individual sheets of paper.

In the Notice of Non-compliance, the Examiner provides an alternative reading of Hayamizu; namely that “Hayamaizu, after the transverse cutter (69), does indeed send a succession of individual normal-sized sheets (much like Applicant) to the next cutter (90), which has been modified to be a perforator.” The Examiner apparently contends, under this reading, that the lengthwise cutter 90 corresponds to the “first perforating tool” of claim 14, in which case the only reasonable interpretation is that the paper cutting system 9 (Figs. 1 and 5) would correspond to the “perforating device” of claim 14. Claim 14 recites “successively receiving a plurality of sheets of paper as input to the *perforating device*,” not as input to the first perforating tool. Thus, even if under the Examiner’s reading the cutter 90 receives individual normal-sized sheets (which Applicant does not concede), the paper cutting system 9 receives a continuous roll of paper, not individual sheets.

In view of the foregoing, even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest a method of selectively perforating sheets of paper of a group of sheets, the method comprising successively receiving a plurality of sheets of paper as input to a perforating device.

For at least the reasons set forth in Sections D.1 and D.2, Applicant respectfully requests that the Board of Appeals reconsider and withdraw the Examiner’s final rejection under 35 U.S.C. §103(a) of the claims of Group I: claims 11, 14, 15, 17, 22, 23 and 37.

3. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING COMBINATION WOULD NOT TEACH OR SUGGEST ALL THE LIMITATIONS RECITED IN CLAIM 1

Claim 1 is separately patentable from claim 14 because claim 1 recites limitations that are not found in claim 14, and that patentably distinguish claim 1 over the art of record (including

Hayamizu and Moll). These limitations, and the reasons that they patentably distinguish claim 1 over the art of record separately from claim 14, are discussed in more detail below. Moreover, claim 14 is separately patentable from claim 1 because claim 14 recites limitations that are not found in claim 1, and that patentably distinguish claim 14 over the art of record. These limitations, and the reasons that they patentably distinguish claim 14 over the art of record separately from claim 1, are discussed above in Section VIII.

Even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest all of the limitations recited in claim 1. The resulting combination would not teach or suggest a perforator for selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through the perforator, the perforator comprising a first perforating tool and an electronic control apparatus configured such that, for each sheet of paper that passes the first perforating device, if perforation is not desired for the page, the electronic control apparatus does not emit a signal to the first perforating tool. Further, the resulting combination would not teach or suggest a perforator comprising, *inter alia*, a first perforating tool past which one or more sheets of paper move successively.

a. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING SYSTEM WOULD NOT INCLUDE A PERFORATOR FOR SELECTIVELY PERFORATING SHEETS OF PAPER OF A GROUP OF SHEETS, WHEREIN SHEETS TO BE PERFORATED ARE SELECTED AS THE GROUP IS MOVING SUCCESSIVELY THROUGH THE PERFORATOR.

Hayamizu does not teach or suggest that rolls of paper to be cut are selected as the roll is moving through the cutting means of Hayamizu. Moreover, Hayamizu does not teach or suggest that the control unit 12 does not emit a signal to the X-axis lengthwise cutter 78 if a cut is not desired for a roll of paper. Rather, Hayamizu discloses that for each drawing, the control unit sends a signal to the X-axis lengthwise cutter and the Y-axis widthwise cutter such that a lengthwise and widthwise cut is made for each drawing on the roll of paper. Thus, in Hayamizu, rolls of paper are not selectively cut, but each roll is automatically cut several times. Further, Moll discloses presetting values for a perforator before receiving any sheet of paper, such that all sheets are perforated, and are perforated the same way. Thus, even if motivation existed to modify Hayamizu to perforate as taught by Moll, and a continuous roll was improperly construed

to be a sheet of paper, the combination of Hayamizu and Moll still would not teach or suggest a perforator for selectively perforating sheets of paper of a group of sheets in which the sheets are selected as the group is moving through the perforator, the perforator comprising an electronic control apparatus configured such that, if perforation is not desired for a sheet, the electronic control apparatus does not emit a signal to a perforating tool. Rather, such combination would, at most, teach a perforator that automatically perforates each sheet of paper, and that includes a control unit that sends a signal to an X-axis lengthwise cutter for each drawing on a roll of paper.

b. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING COMBINATION WOULD NOT TEACH OR SUGGEST A PERFORATOR COMPRISING A FIRST PERFORATING TOOL PAST WHICH ONE OR MORE SHEETS OF PAPER MOVES SUCCESSIVELY.

Even if motivation existed to modify the cutting blade of Hayamizu to perforate at taught by Moll, the resulting combination of Hayamizu and Moll still would not teach or suggest a first perforating tool past which one or more *sheets of paper* move successively, as recited in claim 1. As should be clear from the discussion above with respect to claim 14, a continuous roll of paper (e.g., as taught by Hayamizu) is not a sheet of paper as recited in claim 1, and one of ordinary skill in the art would not be motivated to modify the cutting system of Hayamizu to receive individual sheets of paper.

In view of the foregoing, even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest all the foregoing limitations of claim 1.

For at least the reasons set forth in Sections D.1 and D.3, Appellant respectfully requests that the Board of Appeals reconsider and withdraw the Examiner's final rejection under 35 U.S.C. §103(a) of the claims of Group II: claims 1, 2, 35 and 36.

4. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING COMBINATION WOULD NOT TEACH OR SUGGEST ALL THE LIMITATIONS RECITED IN CLAIM 27

Claim 27 is separately patentable from claims 1 and 14 because claim 27 recites limitations that are not found in claims 1 and 14, and that patentably distinguish claim 27 over the art of record (including Hayamizu and Moll). These limitations, and the reasons that they patentably distinguish claim 27 over the art of record separately from claims 1 and 14, are discussed in more detail below. Moreover, each of claims 1 and 14 is separately patentable from

claim 27 because each of these claims recites limitations that are not found in claim 27, and that patentably distinguish these claims over the art of record. These limitations, and the reasons that they patentably distinguish claims 1 and 14 over the art of record separately from claim 27, are discussed above.

Even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest all of the limitations recited in claim 27. The resulting combination would not teach or suggest a system for selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device. Further, the resulting combination would not teach or suggest a system comprising, *inter alia*, means for successively receiving a plurality of sheets of paper as input to the perforating device.

a. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING SYSTEM WOULD NOT INCLUDE A SYSTEM FOR SELECTIVELY PERFORATING SHEETS OF PAPER OF A GROUP OF SHEETS, WHEREIN SHEETS TO BE PERFORATED ARE SELECTED AS THE GROUP IS MOVING SUCCESSIVELY THROUGH A PERFORATING DEVICE.

As discussed above, Hayamizu does not teach or suggest that rolls of paper to be cut are selected as the roll is moving through the cutting means of Hayamizu. Rather, Hayamizu discloses that a lengthwise and widthwise cut is made for each drawing on the roll of paper. Thus, in Hayamizu, rolls of paper are not selectively cut, but each roll is automatically cut several times. Further, Moll discloses presetting values for a perforator before receiving any sheet of paper, such that all sheets are perforated, and are perforated the same way. Thus, even if motivation existed to modify Hayamizu to perforate as taught by Moll, and a continuous roll was improperly construed to be a sheet of paper, the combination of Hayamizu and Moll still would not teach or suggest a perforator for selectively perforating sheets of paper of a group of sheets in which the sheets are selected as the group is moving through the perforator. Rather, such combination would, at most, teach a perforator that automatically perforates each sheet of paper.

b. EVEN IF HAYAMIZU AND MOLL WERE COMBINED, THE RESULTING COMBINATION WOULD NOT TEACH OR SUGGEST A SYSTEM COMPRISING MEANS FOR SUCCESSIVELY RECEIVING A PLURALITY OF SHEETS OF PAPER AS INPUT TO THE PERFORATING DEVICE.

Even if motivation existed to modify the cutting blade of Hayamizu to perforate as taught by Moll, the resulting combination of Hayamizu and Moll still would not teach or suggest means for successively receiving *a plurality of sheets of paper* as input to a perforating device, as recited in claim 27. As should be clear from the discussion above with respect to claims 1 and 14, a continuous roll of paper (e.g., as taught by Hayamizu) is not a *sheet* of paper, and one of ordinary skill in the art would not be motivated to modify the cutting system of Hayamizu to receive a plurality of sheets of paper.

As discussed above, in the Notice of Non-compliance, the Examiner provides an alternative reading of Hayamizu; namely that “Hayamaizu, after the transverse cutter (69), does indeed send a succession of individual normal-sized sheets (much like Applicant) to the next cutter (90), which has been modified to be a perforator.” The Examiner apparently contends, under this reading, that the lengthwise cutter 90 corresponds to the “first perforating tool” of claim 14, in which case the only reasonable interpretation is that the paper cutting system 9 (Figs. 1 and 5) would correspond to the “perforating device” of claim 14. Claim 14 recites “means for successively receiving a plurality of sheets of paper as input to the *perforating device*,” not as input to the first perforating tool. Thus, even if under the Examiner’s reading the cutter 90 receives individual normal-sized sheets (which Applicant does not concede), the paper cutting system 9 receives a continuous roll of paper, not individual sheets.

In view of the foregoing, even if Hayamizu and Moll were combined, the resulting combination would not teach or suggest all the foregoing limitations of claim 27.

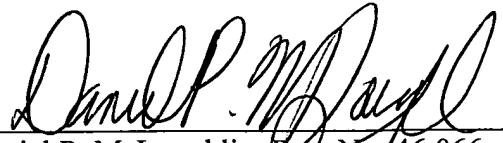
For at least the reasons set forth in Sections D.1 and D.4, Appellant respectfully requests that the Board of Appeals reconsider and withdraw the Examiner’s final rejection under 35 U.S.C. §103(a) of the claims of Group III: claims 27, 28, 30 and 38.

IX. CONCLUSION

Appellant respectfully requests that the Board of Appeals reverse the Examiner’s final rejections under 35 U.S.C. §103(a) of the claims of Group I: claims 11, 14, 15, 17, 22, 23, and

37, the claims of Group II: claims 1, 2, 35 and 36, and the claims of Group III: claims 27, 28, 30 and 38. The Examiner has not made out a prima facie basis for rejecting the claims and the claims are allowable over the prior art of record. It is requested that a Notice of Allowance be granted in this case.

Respectfully submitted,

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Appendix A: Claims As Appealed (37 C.F.R. §1.192(c)(9))

1. A perforator for selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through the perforator, the perforation being along a direction of the movement, the perforator comprising:

a first perforating tool past which one or more sheets of paper move successively, the first perforating tool having a perforating position to perforate paper passing the perforating tool, and having a neutral position to refrain from perforating paper passing the perforating tool, and having an input for receiving a first control signal; and

an electronic control apparatus having an input to receive a second control signal as the group of sheets moves through the perforator, and an output connected to the input of the first perforating tool, wherein, for each sheet of paper that passes the first perforating tool, the second control signal is based on information specific to the sheet,

wherein, the electronic control apparatus is configured such that, for each sheet of paper that passes the first perforating tool, if perforation is desired for the sheet based on the second control signal, the electronic control apparatus emits a signal from the output of the electronic control apparatus to the input of the first perforating tool to place the first perforating tool in the perforating position, and if perforation is not desired for the sheet based on the second control signal, the electronic control apparatus does not emit a signal to the first perforating tool.

2. A perforator as claimed in claim 1, wherein the electronic control apparatus is operative, for each sheet of paper that passes the first perforating device, to set a distance of the first perforating tool from the sheet such that, in the perforating position, the first perforating tool touches the sheet, and in the neutral position, the first perforating tool is kept apart from the sheet.

11. A method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforation device, the perforation being along a direction of the movement, the perforation device including a perforating tool having a perforating position in which a sheet of paper is perforated and a neutral position in which a sheet of paper is not perforated, the device further including a control unit to control the perforating tool, the method comprising acts of:

successively receiving the moving sheets at the perforating device;

as the group of sheets moves through the perforation device, for each received sheet, receiving at the control unit a first control signal based on information specific to the received sheet;

sending a second control signal from the control unit to the perforating tool to set the perforating tool into the perforating position if, based on the first control signal, a received sheet to be perforated enters the perforating device; and

perforating the received sheet along the direction of movement in accordance with the second control signal to produce a perforated sheet.

14. A method of selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device, the perforating device including a first perforating tool for perforating sheets of paper and a control unit for controlling the perforating tool, wherein the first perforating tool perforates the paper along a direction of the movement of the sheets, the method comprising acts of:

successively receiving a plurality of sheets of paper as input to the perforating device;

and

positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass imperforated, including:

as the group of sheets moves through the perforation device, for at least a first sheet, receiving at the control unit a first control signal based on information specific to the first sheet;

sending, based on the first control signal, a second control signal from the control unit to the first perforating tool; and

in response to receiving the second control signal from the control unit, actuating the first perforating tool to assume the perforating position while the first sheet passes.

15. The method of claim 14, wherein the act of positioning includes:

maintaining the first perforating tool in the neutral position if no second control signal is received at the first perforation tool.

17. The method of claim 14, wherein the first control signal is received from a reader that reads codes from the sheets of paper.

22. The method of claim 14, wherein the act of receiving the first control signal includes:
reading a code in the sheets with a reader.

23. The method of claim 11, wherein, for each received sheet, the act of receiving the first control signal includes:
reading a code on the sheet with a reader.

27. A system for selectively perforating sheets of paper of a group of sheets, wherein sheets to be perforated are selected as the group is moving successively through a perforating device, the perforating device including a first perforating tool for perforating paper and a control unit for controlling the perforating tool, wherein the first perforating tool perforates the paper along a direction of the movement of the sheets, the system comprising:

means for successively receiving a plurality of sheets of paper as input to the perforating device; and

means for positioning the first perforating tool in either a perforating position to perforate paper or a neutral position to allow paper to pass unperforated, including:

means for receiving at the control unit as the group of sheets moves through the perforation device, for at least a first sheet, a first control signal based on information specific to the first sheet;

means for sending, based on the first control signal, a second control signal from the control unit to the first perforating tool, to cause the first perforating tool to assume the perforating position; and

means for actuating, in response to receiving the control signal from the control unit, the first perforating tool to assume the perforating position while the first sheet passes.

28. The system of claim 27, wherein, if no second control signal is received at the first perforation tool, the first perforating tool is maintained in the neutral position.

30. The system of claim 27, wherein the first control signal is received from a reader that reads a code from the at least first sheet of paper.

35. The perforator of claim 1, wherein for each sheet of paper that passes the first perforating device, the second control signal is based on a code on the sheet of paper.

36. The perforator of claim 35, wherein, the perforator is connected to a reader that, for each sheet of paper that passes the perforating device, reads the code from the sheet of paper.

37. The method of claim 17, wherein the method further comprises an act of, for at least the first sheet, reading a code from the first sheet on which the first control signal is based.

38. The system of claim 30, wherein the system includes the reader.